CHAPTER 15: SOCIO-ECONOMICS, RECREATION AND TOURISM

Figures (Volume 2 of this EIA Report)

There are no figures associated with this Chapter.

Technical Appendices (Volume 4 of this EIA Report)

Technical Appendix 15.1: Policy and Strategy Overview

Technical Appendix 15.2: Socio-economic, Recreation and Tourism Baseline

Technical Appendix 15.3: Draft Outdoor Access Management Plan

15. SOCIO-ECONOMICS, RECREATION AND TOURISM

Executive Summary

15.1.1 This Chapter considers the predicted effects on socio-economic activity, and recreation and tourism activity during construction and operation of the Proposed Development.

15.1.2 This Chapter has been compiled by MKA Economics, who specialise in appraising the economic viability, socio-economic value, and, advising on the delivery of, economic development projects. Based at the Innovation Park at the University of Stirling, the company works across sectors and geographies and has been retained by Highland and Island Enterprise on their Economic Impact Assessment Framework since 2013.

15.1.3 The Applicant is proposing to apply for consent under section 37 (s. 37) of the Electricity Act 1989 to construct and operate approximately 13 km of new double circuit steel structure 400 kV overhead transmission line (OHL) between the proposed Coire Glas Switching Station, and the existing Fort Augustus Substation (via the proposed new Loch Lundie Substation) and Ancillary Works, as described in **Chapter 3: Project Description**. The works are referred to in this Chapter as the 'Proposed Development'.

15.1.4 As a significant investment (approximately £47 million) in a key economic sector, the Proposed Development supports both pillars of the national economic strategy and each of the broad priority areas set out in the strategy. It would provide contract and employment opportunities for Scottish and Highland based businesses throughout the construction and operational phases.

15.1.5 The capital investment would enable long-term security of supply and increasing capacity for renewable electricity generation for the region, and the UK as a whole.

15.1.6 There would be direct construction employment benefits as part of the investment plans, where 63.8 Person Years Employment (PYE) would be generated as a result of the construction programme. Taking into account the origin of these jobs, displacement and multiplier effects, the construction works alone would generate 16.8 PYE in the Highlands and 43.2 PYE at a Scottish level. This equates to a gross valued added (GVA) impact of £1.19 million to the Highlands and £2.75 million at a Scottish level over the construction period.

15.1.7 Overall, taking account of displacement and multiplier effects, the Proposed Development is expected to generate 1.3 operational jobs per annum in the Highlands and 1.6 across Scotland per annum. This equates to a GVA impact of £48,000 to the Highlands and £92,000 across Scotland per annum.

15.1.8 The predicted residual socio-economic effect in relation to construction activities are deemed to be of **Minor beneficial** and not significant. The predicted residual socio-economic effect in relation to operational activities are deemed to be of **Minor beneficial** and not significant.

15.1.9 The review of the recreational and tourism asset base includes a review of the notable visitor attractions across the Highlands and locally. None of these are located close to the Proposed Development. Similarly, the review of core paths, rights of ways and hill tracks / mountain routes in the area has shown that these are largely unaffected by the Proposed Development.

15.1.10 The predicted residual recreational and tourism effect in relation to construction and rerouting of the existing OHLs and operation and maintenance activities are deemed to be **Negligible** and not significant. The predicted residual recreational and tourism effect in relation to operational activities are deemed to be **Negligible** and not significant.

15.1.11 SSEN Transmission has committed to maximise the economic opportunities for the local area and business and communities in the Highland Council area, where possible and is committed to using local supply chain where feasible and their principal contractors are also encouraged to do the same.

15.1.12 SSEN Transmission has a raft of corporate communications which can be reviewed on their corporate website[1] as to the contribution it makes to the Scottish economy, its sustainability ethos and track record of developing and delivering on community investment.

15.1.13 In terms of the recreational and tourism effects, the routeing and alignment stage has implemented mitigation by design, to minimise landscape and visual effects. Community consultation has been undertaken to gain local and stakeholder views on the routing of the Proposed Development and SSEN Transmission has taken on board as far as possible these views in developing the Coire Glas Grid Connection project to minimise against any adverse recreational and tourism impacts.

[1] https://www.sse.com/sustainability/reporting/

15.2 Introduction

15.2.1 This Chapter reports on the assessment of the potential and likely predicted socio-economic, recreation and tourism impacts of the Proposed Development.

15.2.2 The Applicant is proposing to apply for consent under section 37 (s. 37) of the Electricity Act 1989 to construct and operate approximately 13 km of new double circuit steel structure 400 kV overhead transmission line (OHL) between the proposed Coire Glas Switching Station, and the existing Fort Augustus Substation (via the proposed Loch Lundie Substation) and Ancillary Works, as described in **Chapter 3: Project Description**. The works are referred to in this Chapter as the 'Proposed Development'.

15.2.3 The assessment has been carried out in line with Scottish Government policy as set out in the 'National Planning Framework 4' (NPF4)[2] and specific guidance on 'Net Economic Benefit and Planning'[3]. These planning policies and guidance highlight how the net economic benefit generated by a proposed development can be assessed as a material consideration in the decision-making process.

15.2.4 The assessment considers the likely significance of effects of the Proposed Development on the economy in both quantitative and qualitative terms. In particular, it considers the effects of the Proposed Development on employment and economic output, as well as recreational and tourism assets and activities.

15.2.5 The assessment describes the methods used to assess impact, the socio-economic and tourism baseline conditions, and the potential impacts of the Proposed Development during the construction and operational phases. The wider, and less tangible and longer-term economic benefits of the Proposed Development are also assessed. The Chapter should be read in conjunction with **Technical Appendix 15.1: Policy and Strategy**, **Technical Appendix 15.2: Economic, Recreation and Tourism Baseline and Technical Appendix 15.3: Draft Outdoor Access Management Plan**.

15.2.6 This Chapter has been compiled by MKA Economics, who specialise in appraising the economic viability, socio-economic value, and, advising on the delivery of, economic development projects. Based at the Innovation Park at the University of Stirling the company works across sectors and geographies and has been retained by Highland and Island Enterprise on their Economic Impact Assessment Framework since 2013. A table presenting relevant qualifications and experience is included in **Technical Appendix 4.1: EIA Team**, contained within Volume 4 of this EIA Report.

15.3 Scope of Assessment

Study Area

15.3.1 The Study Area encompasses the area over which all desk-based and field data were gathered to inform the assessment presented in this Chapter. The Proposed Development is situated in the Scottish Highlands, in the Invergarry and Fort Augustus area, and is required to connect the consented Coire Glas Pumped Storage Scheme to the National Grid. The Proposed Development is also part of a wider rationalisation exercise to reduce the overall amount of grid infrastructure in the surrounding area. This would comprise re-routeing the existing 132 kV Fort Augustus to Fort William OHL and the existing 132 kV Invergarry Tee OHL into the proposed Loch Lundie Substation. Following the construction of the new 400 kV OHL, the existing 132 kV Fort Augustus to Fort William OHL would also be decommissioned and dismantled between the proposed Loch Lundie Substation and the existing Fort Augustus Substation.

15.3.2 The construction work is expected to begin in summer 2024 and be completed by July 2027, although this would extend to April 2028 when considering the decommissioning and rerouting of the existing OHLs referred to above.

[2] Scottish Government (2023). National Planning Framework 4

[3] Scottish Government (2016). Net Economic Benefit and Planning

Consultation Responses

15.3.3 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. **Table 15.1** summarises pre-application consultation responses relevant to the Socio-economic, Recreation and Tourism Assessment and provides information on where and/or how points raised have been addressed in this assessment.

15.3.4 Further details on the consultation and scoping responses received can be found in **Chapter 5: Scoping and Consultation**, and associated technical appendices.

Table 15.1: Consultation Responses

Consultee	Consultation Type	Response	Action
The Highland Council (THC)	Pre-Application Response 1st December 2021	Consideration of the socio-economic effects of the Proposed Development, as well as effects on recreation and tourism assets within the area would be included within the EIA Report. As noted above, an Outline Access Plan would also be included. The potential for significant effects on the visual amenity of recreation and tourism receptors would be fully considered in the EIA Report through the LVIA.	Presentations of a socio-economic and tourism baseline position and stated impact in terms of economic (jobs, turnover and Gross Value Added (GVA)) and social impacts, and the wider community impacts are provided in this Chapter of the EIA Report. An Outdoor Access Plan (OAP) has been completed and forms part of this Chapter (see **Technical Appendix 15.3**).

15.3.5 In terms of economic effects, this assessment has employed appraisal techniques consistent with those outlined in the Scottish Government's latest NPF4[2] policy and guidance on 'Net Economic Benefit and Planning'[4], and also Highlands and Islands Enterprise's Economic Appraisal Guidance Note[5] for the appraisal of economic development initiatives.

15.3.6 This assessment calculates both construction and operational employment associated with the Proposed Development, and the economic effects this would have on the economy, at both a country and local authority level.

15.3.7 This assessment outlines the role the Proposed Development can play in supporting national and regional economic development policies and strategies. This is presented in **Technical Appendix 15.1**. It presents an overview of the local economic conditions, assessing them against the Highland, Scottish and Great Britain (GB) situation, to set the development context for the Proposed Development. Finally, it outlines the potential benefits of the Proposed Development on employment, investment, local spending, community development and the local business base, during construction and operation.

15.3.8 For the purposes of this Chapter, both the baseline and impact assessments define the regional area as the Highland Council (THC) area (as the local authority), the country level area as Scotland (as the national planning authority) and the national area as Great Britain (GB). A socio-economic profile is presented in more

[4] Scottish Government (2016). Net Economic Benefit and Planning

[5] Highlands and Islands Enterprise / Scottish Enterprise (2016). Economic Impact Assessment Guidance

detail in **Technical Appendix 15.2**. In terms of the tourism and recreation aspect of the assessment, more sub-regional (or local) assessment has been undertaken. This has been defined according to a 4 km isochrone, as presented in the Recreation and Tourism Baseline sub-section and in **Technical Appendix 15.2.**

15.4 Legislation, Policy and Guidance

15.4.1 The legislation, policy and guidance assessment is presented as **Technical Appendix 15.1**. The technical appendix summarises the relevant policy in relation to socio-economic and tourism effects. Further detail on planning, energy and climate change policy can also be found referenced in **Chapter 6: Planning and Energy Policy Context.**

15.4.2 In summary, the policy generally cascades from the new NPF4[6] which supersedes Scottish Planning Policy[7]. NPF4 has an increasing importance in supporting the development of new renewable energy technologies, as the overarching energy policy (Policy 11) states:

'To encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies including hydrogen and carbon capture utilisation and storage (CCUS)'

15.4.3 There is specific reference in relation to 'net economic impact' for renewable energy proposals at Policy 11(C) of NPF4, which states:

'Development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.'

15.4.4 The regional planning, economic development and tourism strategies seeks to develop the region in a sustainable manner, seeking new investment and jobs in key sectors and doing so in a way which protects the environment and supports the vision of a transition to net zero.

15.5 Methodology

15.5.1 There are no published standards or guidelines that set out a preferred methodology for assessing the likely socio-economic or tourism impacts of energy proposals including grid connection projects. The methods applied within this assessment are therefore based on established best practice, including commonly used methodologies and recognised approaches from Scottish Government and Highlands and Islands Enterprise. These include appraisal techniques consistent with those outlined in the Economic Impact Guidance[8] for the appraisal of economic development and regeneration initiatives. The assessment is also consistent with the latest Scottish Government's Draft Advice Note on Economic Benefit and Planning[9].

15.5.2 The relevant policy context and methods used to assess the impacts are described together with the baseline conditions that would exist in the area in the absence of the Proposed Development.

15.5.3 The assessment has contextualised the Proposed Development both in terms of Scottish and local renewable and energy policy and identified where the Proposed Development fits within policy as well as its facilitating towards renewable targets.

[6] Scottish Government (2023). National Planning Framework 4
[7] Scottish Government (2014). Scottish Planning Policy
[8] Highlands and Islands Enterprise / Scottish Enterprise (2016). Economic Impact Assessment Guidance
[9] Scottish Government (2016). Net Economic Benefit and Planning

15.5.4 Baseline conditions have been established through desktop studies, presented in more detail in **Technical Appendix 15.2**, based on review of relevant policy considerations of national and local governments, available statistics, and web-based review of assets, activities and attractions.

15.5.5 The assessment of effects is based on the project description as outlined in **Chapter 3: Project Description** of this EIA Report**.** Unless otherwise stated, potential effects identified are considered to be negative.

15.5.6 The assessment considers the potential effects of the following:

- Construction effects; and
- Operational effects.

15.5.7 These are described in **Table 15.2**.

Table 15.2: The Proposed Development Components

Phase	Potential Economic Impacts
Construction and rerouting	OHL manufacture; including the steelworks, cabling and components; Balance of plant; including activity and supplies and the construction of access tracks (temporary and permanent); and Rerouting of the existing OHL
Operation and Maintenance	Maintenance; such as tower and conductor maintenance operated and maintained by contract or by technicians working for the Applicant; and Site maintenance; including routine tasks such as maintaining site access tracks and bridges, maintaining drainage ditches and repairing gates and fences. There will also be periodic forestry work to maintain a resilient operational corridor during the operational life of the OHL.

15.5.8 The construction of the Proposed Development and rerouting of the existing OHLs along with operation and maintenance impacts should be presented in the context of the wider socio-economic impacts of the Proposed Development. The description of the Proposed Development is set out in **Chapter 1: Introduction and Background** and **Chapter 3: Project Description**.

15.5.9 Economic impacts can be expected during the development, construction, operational and rerouting of the existing OHLs phases of the Proposed Development. These impacts will differ in their scale, duration and geographic coverage. The long-term impacts associated with the decommissioning phase of the Proposed Development are not assessed, as consent will be applied for in perpetuity.

15.5.10 The assessment further describes the commitments made by SSEN Transmission to both minimise the impacts to local residents who may potentially be directly impacted by the Proposed Development as well as identifying the steps taken by SSEN Transmission to bring benefit to the local community.

15.5.11 The predicted socio-economic, tourism and recreational effects of the Proposed Development on the recreational and tourism asset base are assessed, using the significance criteria outlined in **Table 15.3**. As there are no published standards or technical guidelines that set out a preferred methodology for assessing the likely socio-economic, recreation or tourism impacts of a project of this nature, professional judgement, with reference to commonly used methodologies, and recognised approaches to quantifying economic impacts, is used to determine the significance criteria. Major or moderate effects are defined as significant in In EIA terms.

Table 15.3: Significance Criteria

Significance	Description
Major	Major loss / improvement to key elements / features of the baselines conditions such that post development character / composition of baseline condition will be fundamentally changed. For example, a major long-term alteration of socio-economic conditions, a major reduction / improvement of recreational assets, or a substantial change to tourism spend.
Moderate	Loss / improvement to one or more key elements / features of the baseline conditions such that post development character / composition of the baseline condition will be materially changed. For example, a moderate long-term alteration of socio-economic conditions, a moderate reduction / improvement in the recreational asset, or a moderate change to tourism spend.
Minor	Changes arising from the alteration will be detectable but not material; the underlying composition of the baseline condition will be similar to the pre-development situation. For example, a small alteration of the socio-economic conditions, a small reduction / improvement in the recreational asset, or a small change in tourism spend.
Negligible	Very little change from baseline conditions. Change is barely distinguishable, approximating to a “no change” situation.

Limitations to the Assessment

15.5.12 There are no standards or adopted guidance on how to assess socio-economic, tourism and recreational effects. This assessment, as well as the significance criteria used and data sources consulted, is based on professional judgement and previous experience of undertaking socio-economic, tourism and recreation assessments. However, it is considered that this limitation does not affect the robustness of this assessment.

15.6 Baseline Conditions

15.6.1 A desk-based review of publicly available information has been undertaken to identify the key characteristics of the local economy, existing land use and tourism and recreational facilities in the Lochaber, Skye and Wester Ross region of the Highlands. The baseline is presented in **Technical Appendix 15.2**.

15.6.2 In summary, the regional economy has witnessed a slower population growth rate than experienced at the national level. It has a lower proportion of working age residents and a lower proportion of economically active residents. It also has a higher proportion of worklessness. Although regional unemployment is lower at the regional level than the national level and has been reducing over the period from 2021 to late 2022 it has started to increase recently. Multiple deprivation is not a major issue at the regional area though the position has worsened over the period from 2012 to 2020, with pockets of deprivation in the region's main city (Inverness) and other larger towns including Fort William. The regional economy continues to recover from the devasting economic effects of the Covid-19 pandemic and the ongoing issues surrounding Brexit.

15.6.3 In terms of tourism and recreation, the Highlands is a well-known and popular tourism destination, with growth returning after the Covid-19 pandemic, for both domestic and international visitors., There are a number of popular visitor attraction in the Loch Ness area, although these are not close to the Proposed Development. There are other smaller tourist attraction in and around Fort Augustus, and within the Great Glen and also popular walking and sailing routes. These too are not adjacent or close to the Proposed Development.

15.7 Potential Effects

15.7.1 This section considers the potential impacts and associated effect significance of the construction, and operation of the Proposed Development based on the typical activities described in **Chapter 3: Project Description**. The assessment focuses on the estimated construction related impacts in employment and GVA

terms and the longer terms effects of new permanent employment and annual GVA effect when fully operational. It does not include the wider economic effects of the Coire Glas Pumped Storage Hydro Scheme[10].

Construction Effects

15.7.2 The total employment figures for development and construction activities were estimated by the Applicant. These total employment impacts associated with the construction phase, by task, are outlined in **Table 15.4** below.

15.7.3 The employment impacts during the construction phase (including rerouting of the existing OHLs) are reported in Person Year Employment (PYE) because the contracts would be for fixed lengths. Person years measures the number of years of full-time employment generated by a project. For example, a 20-strong 'work gang' on this project for 18 months would be reported as 30 person years, essentially the 20 people working one whole year (20 person years), and the same 20 people working for a further six months, or 10 person years. **Table 15.4** summarises the breakdown of PYE across the construction and rerouting of the existing OHLs period. This shows a total of 63.8 PYEs over the entire construction and rerouting of the existing OHLs project.

Table 15.4: Construction Employment Impacts by Type

Construction Tasks	Person Year Employment (PYE)
Access	6.5
Foundations	14.1
Piling Works	6.0
Tower Erection	11.3
Wiring	8.7
Cabling	9.4
Commissioning	0.0
Rerouting of the existing OHLs	5.0
Reinstatement	2.8
Total	**63.8**

Source: SSEN Transmission

15.7.4 In addition to presenting the employment impacts according to main construction activity areas, the Applicant presented an estimate on the expected origin of the predicted employment benefits. At this early stage of the project procurement stage the exact origin of the employment required is not known, however, for the purposes of this assessment it is assumed that 25% would be drawn from the Highland labour market, 25 % from Scotland, 25 % from the rest of the UK and 25% from overseas.

15.7.5 The resultant impacts of the above assumptions present the direct construction related impacts across each spatial area across the construction period set out within **Table 15.5**.

Table 15.5: Total Direct Construction Employment Impacts

[10] These effects were presented in Chapter 20 – Socio-Economic of the Revised Coire Glas Pumped Storage Scheme EIA Report (MKA Economics, March 2018).

Construction Tasks	Average Number of PYEs	Person Year Employment Split by Area			
		Highland	Scotland	UK	Overseas
Access	6.5	1.6	1.6	1.6	1.6
Foundations	14.1	3.5	3.5	3.5	3.5
Piling Works	6.0	1.5	1.5	1.5	1.5
Tower Erection	11.3	2.8	2.8	2.8	2.8
Wiring	8.7	2.2	2.2	2.2	2.2
Cabling	9.4	2.3	2.3	2.3	2.3
Commissioning	0.0	0.0	0.0	0.0	0.0
Rerouting of the existing OHLs	5.0	1.3	1.3	1.3	1.3
Reinstatement	2.8	0.7	0.7	0.7	0.7
Total	**63.8**	**16.0**	**16.0**	**16.0**	**16.0**

Source: SSEN Transmission

15.7.6 Of the 63.8 construction related years of employment supported across the construction period, 16 PYE are expected to benefit the regional (Highland) economy, a further 16 PYE at a Scottish level, a further 16 PYE nationally and a further 16 PYE benefiting non-UK areas.

15.7.7 In order to calculate the economic effect of new jobs, the GVA per head for civil engineering related projects in the Highlands and Scotland are utilised, in this case £70,953 and £63,769 respectively. These figures are also drawn from the Scottish Annual Business Statistics[11]. The resultant economic impact at the Highlands and Scottish levels across the construction period are shown in **Table 15.6**. It should be noted the Scottish figures include those for the Highlands.

Table 15.6: Gross Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of PYE	GVA per PYE	Total GVA
Highlands	16.0	£70,953	£1.14 million
Scotland	32.0	£63,769	£2.04 million

Source: SSEN Transmission

15.7.8 Economic impact assessments must also consider the effects of displacement as a result of the Proposed Development having an adverse effect on other economic assets and activities. Displacement occurs when the Proposed Development takes labour, land and / or capital from other firms / projects within the area being assessed. Due to the nature of the Proposed Development, displacement levels are not expected to be significant. However, there is expected to be some displacement and for the purposes of accounting for displaced activity it is assumed that displacement would be 25% at both the regional and national levels. This is deemed by Highland and Island Enterprise as a 'Low' level of displacement. **Table 15.7** highlights the net employment and GVA impacts after the effects of displacement.

[11] Scottish Government (2021). Annual Business Statistics

Table 15.7: Net Employment and GVA Impacts of Construction at Highland and Scottish Level

Location	Number of PYE	GVA per PYE	Total GVA
Highlands	12.0	£70,953	£851k
Scotland	24.0	£63,769	£1.53 million

Source: SSEN Transmission

15.7.9 Evidence has shown that investment in construction projects can have strong 'multiplier effects'. This is where output in a certain part of the economy generates economic activity in other areas of the economy. Multipliers can measure how new capital investment in energy projects can generate additional income across the economy, including for people who live nearby developments.

15.7.10 Economic assessments must consider multiplier effects, which are the further economic activity associated with additional income and supplier purchases. An increase in 'final demand' for a product and an associated increase in the output of that product, where other producers of goods and services respond to this increased demand, is known as the 'direct effect'. This can run right through the supply chain, known as the 'indirect effect'. As employment increases so too do levels of household income, some of which is spent on other goods and services, and this is known as the 'induced' effect.

15.7.11 Multiplier effects for different Scottish industries are provided by the Scottish Government[12], with Construction having a Type II multiplier of 1.8. There are no regional level multipliers in Scotland and therefore the national level Type II multipliers has been reduced to 1.4 to assess the indirect and induced impacts for both the regional economy. The GVA per head presented for the net economic assessment is that for the Highlands and Scottish economies. The resultant impact of multiplier effects is shown in **Table 15.8** below.

Table 15.8: Additional Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of Additional PYEs	GVA per PYE	Total GVA
Highlands	4.8	£70,953	£341k
Scotland	19.2	£63,769	£1.22 million

Source: SSEN Transmission

15.7.12 **Table 15.9** presents the final net additional effects across the construction period, having taken account of both displacement and multiplier effects.

Table 15.9: Net Additional Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of Net Additional PYEs	Net Additional GVA
Highlands	16.8	£1.19 million
Scotland	43.2	£2.75 million

Source: SSEN Transmission

15.7.13 Overall, taking account of displacement and multiplier effects, the Proposed Development is expected to generate 16.8 PYE in the Highlands and 43.2 PYE at the Scottish level. This equates to a GVA impact of £1.19 million to the Highlands and £2.75 million at the Scottish level over the construction period.

[12] Scottish Government (2019): Input Output Tables

15.7.14 Construction of the Proposed Development and rerouting of the existing OHL's is predicted to result in a temporary **Minor Beneficial** and not significant effect on the economy in Highland, and a **Minor Beneficial** and not significant effect on the economy in Scotland.

Operation Effects

15.7.15 The operational employment levels were provided by SSEN Transmission. The employment impacts associated with the operation and maintenance phase are outlined in **Table 15.10** below. This shows that it is estimated that two full time jobs would be created once the Proposed Development is fully operational. It should be noted that this investment is one of a number of large-scale infrastructure projects being developed by SSEN Transmission, and collectively these are generating a significant level of new jobs across their operational business. However, for the purposes of this investment alone, two operational full-time jobs have been assumed.

Table 15.10: Operation and Maintenance Employment Impacts by Type

Posts	Average Number of Full Time Jobs
Operation and Maintenance	2
Total	2

Source: SSEN-Transmission

15.7.16 SSEN Transmission presented an estimate on the expected origin of the predicted employment benefits, these assumptions are presented in **Table 15.11** below.

Table 15.11: Operation and Maintenance Employment Impacts by Area

Posts	Percentage Split by Area			
	Highland	Scotland	UK	Overseas
Operation and Maintenance	50%	50%	0%	0%

Source: SSEN-Transmission

15.7.17 The resultant impacts of the above assumptions present the direct operational related impacts across each spatial area set out in **Table 15.12**.

Table 15.12: Total Direct Operation and Maintenance Employment Impacts

Posts	Average Number of Full Time Jobs	Employment Split by Area			
		Highland	Scotland	UK	Overseas
Operation and Maintenance	2	1	1	0	0
Total	2	1	1	0	0

Source: SSEN-Transmission

15.7.18 Of the two full time operation and maintenance jobs, one is expected to benefit the regional (Highland) economy and a further one at the Scottish level.

15.7.19 In order to calculate the economic effect of new jobs, the GVA per head for professional, scientific and technical work in the Highlands and Scotland are utilised, in this case £37,126 and £57,529 respectively. These figures

are also drawn from the Scottish Annual Business Statistics[13]. The resultant economic impact at the Highlands and Scottish levels are shown in **Table 15.13** below.

Table 15.13: Gross Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Full Time Jobs	GVA per Employee	Total GVA
Highlands	1	£37,126	£37,126
Scotland	1	£57,529	£57,529

Source: SSEN-Transmission

15.7.20 As noted in the construction and rerouting of the existing OHLs phase, economic impact assessments must also consider the effects of displacement. For the Proposed Development, displacement levels are not expected to be as significant as the construction related activity and it is assumed that displacement would also be around 10% during operation and maintenance at both the regional and national levels. **Table 15.14** highlights the net employment and GVA impacts after the effects of displacement.

Table 15.14: Net Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Full Time Jobs	GVA per Employee	Total GVA
Highlands	0.9	£37,126	£33,413
Scotland	0.9	£57,529	£51,776

Source: SSEN-Transmission

15.7.21 Multiplier effects (as outlined above) for different Scottish industries are provided by the Scottish Government, with 'Repair and Maintenance' having a Type II multiplier of 1.8. In the absence of a regional multiplier, the national multiplier has been reduced to 1.4 to represent the regional economic impact. The GVA per head presented for the net economic assessment is that for the entire Highlands (£37,126) and Scottish (£51,776) economies. The resultant impact of multiplier effects (the additional employment generated) is shown in **Table 15.15** below.

Table 15.15: Additional Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Additional Jobs	GVA per Employee	Total GVA
Highlands	0.4	£37,126	£14,850
Scotland	0.7	£57,529	£40,270

Source: SSEN-Transmission

15.7.22 **Table 15.16** presents the net additional effects, having taken account of both displacement and multiplier effects.

[13] Scottish Government (2021). Annual Business Statistics

Table 15.16: Net Additional Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Net Additional Full Time Jobs	Net Additional GVA
Highlands	1.3	£48,264
Scotland	1.6	£92,046

Source: SSEN-Transmission

15.7.23 Overall, taking account of displacement and multiplier effects, the Proposed Development is expected to generate 1.3 operational jobs per annum in the Highlands and 1.6 operational jobs across Scotland per annum. This equates to a GVA impact of £48,000 to the Highlands and £92,000 across Scotland per annum.

15.7.24 The effect of operations and maintenance expenditure on the Highland and Scottish economies was assessed as **Minor Beneficial** and therefore not significant.

Recreation and Tourism Effects

15.7.25 The Coire Glas Pumped Storage Scheme, together with the Proposed Development, will directly help to meet increased electricity demand and meet net zero carbon targets fixed by the Scottish and UK Governments to achieve net zero by 2045 and 2050 respectively. The Proposed Development is a grid connection for a pumped storage hydro scheme, which plays an important role in balancing the grid given the increase in renewable generation.

15.7.26 There have been a number of research exercises completed regarding the opinions of tourists towards wind farms and related renewable energy and transmission infrastructure. Whilst the Coire Glas Pumped Storage Scheme is considered to be a low carbon flexibility energy storage development rather than a renewables development, the comparison with opinions of tourists towards renewables energy and transmission infrastructure for the purposes of this assessment is relevant. A summary of the most relevant and highly regarded research includes:

- Achievability of the Scottish Government's Renewable Energy Targets;
- Public Attitudes Tracking Survey;
- Potential Impacts of Wind Farms and associated Grid Infrastructure on Welsh Tourism; and
- MKA Economics and VisitInvernessLochNess Research on Tourism and Renewables.

15.7.27 Perhaps the most relevant research was carried out as part of the Scottish Parliament's Economy, Energy and Tourism Committee Inquiry[14] into renewable energy targets. Inquiry evidence was based on a review of surveys which appraised the tourist impact of renewable energy projects, including transmission infrastructure.

15.7.28 Overall, the study concluded "*no witness has provided the Committee with robust, empirical evidence, as opposed to anecdotal comment and opinion, that tourism is being negatively affected by the development of renewable projects.*"

15.7.29 The report also found: *"Whilst care always needs to be taken in terms of the planning process and decisions on the siting of individual projects in areas popular with tourists and in our rural and wild land areas, no one has provided the Committee with evidence, as opposed to opinion."*

15.7.30 In addition to VisitScotland research, the UK Government regularly track public views on renewable developments, and a more recent, and regular, piece of research is issued quarterly by the Department of Business, Energy and Industrial Strategy (BEIS), in their 'Public Attitudes Tracker'[15]. In December 2022, this

[14] Scottish Parliament (2012). Achievability of the Scottish Government's Renewable Energy Targets

[15] Department of Business, Energy and Industrial Strategy (2022). Public Attitudes Tracker

reported that support for renewable energy remained steady at 88%. Levels of support have remained between 74% and 88% since the question was first asked in March 2012. Opposition to renewable energy remained at its lowest point across the tracker at 2%, having previously fluctuated between 2% and 5% between March 2012 and June 2020. The current levels are the highest they have been in terms of support for renewables and amongst the lowest opposing renewables since the survey commenced in 2012.

15.7.31 A study of the tourism effects of renewable development in Wales was completed in 2014[16]. This backs up the evidence from Scottish research which concluded that wind farms and steel lattice towers have a limited impact on tourism. It did state that the evidence base for tourism impacts of associated infrastructure is far less developed than that for wind farms. The few studies which have addressed the subject have focused on visitors' opinions of towers, which consistently find that reactions are more negative than toward wind turbines. However, there is no evidence that the existing National Grid infrastructure, which is concentrated in North and South Wales, often in popular scenic areas, discourages visitors.

15.7.32 MKA Economics worked with VisitInvernessLochNess (VILN) in 2022[17] to ascertain the views of local businesses and stakeholders as to the effects of renewable developments around Loch Ness and their effect of tourism. The online survey of local businesses found that only 10% of respondents noted that they were not supportive of renewable development in the Loch Ness area. This is consistent with VisitScotland's own research of consumers[18], which stated that 90% of visitors were not dissuaded from visiting or revisiting an area which had sight of a renewable development. Only 19% felt that visitors may be dissuaded from visiting an area due to the presence of a renewable development. This is above the national VisitScotland research, but only by 10% - suggesting businesses are slightly more nervous than visitors about the impact of renewable developments on local tourist trade.

15.7.33 MKA Economics consulted with the CEO of VILN, VisitScotland, Highland Tourism, THC Tourism and a local representative and Highland Tourism Ambassador (Willie Cameron) as part of this research. In summary, the key stakeholders embraced the opportunities afforded by renewable developments and associated infrastructure and recognised the benefits for tourism and community groups as a result of wind farms and renewable infrastructure in the Loch Ness area.

15.7.34 VILN now have almost 500 tourism business members, of which 85% are accommodation providers. VILN has heard nothing but good points about renewables, low carbon, the heritage of hydro power and the important role renewables and tourism play locally. This was consistent with the consultations with the other stakeholders.

15.7.35 Essentially, it validated the national research which noted no significant adverse effects, in fact it was noted that Urquhart Castle numbers increased from 180,000 per annum in 2005 to 520,000 per annum in 2019, whilst during this time the development of wind farms increased. There are other statistics around this topic, i.e., in Scotland the number of turbines increased from 1,082 in 2009 to 3,772 in 2019, and the installed capacity increased from 1.9 GW to 8.0 GW – while employment in tourism-related sectors in Scotland also grew during this decade, an increase of 20%.

15.7.36 Furthermore, it is also known that over the period 2010 to 2019, the Highland's tourism sector expanded by 87% in GVA terms and 51% in turnover terms, compared to 42 % and 25 % increases respectively at the Scottish level. This is notable as there was an increasing number of renewable developments in this period, and notably the construction and operation of the Beauly-Denny 400 kV OHL, which is predominantly in the Highlands.

15.7.37 The green economy, net-zero drive and green tourism is all working together and it is not foreseen to result in any significant issues in this respect. The review of primary and secondary research highlights that there are

[16] Welsh Government (2014). Potential Impacts of Wind Farms and associated Grid Infrastructure on Welsh Tourism
[17] MKA Economics (2022). Business Survey of Renewable Developments in Inverness and Loch Ness
[18] VisitScotland (2011). Wind Farm Consumer Research

negligible effects on tourism and recreational assets at construction and operational phases of renewable energy developments.

15.7.38 **Technical Appendix 15.2** has outlined an overview of the recreational and tourism asset base. This includes a review of all the notable visitor attractions within the general vicinity of the Proposed Development. A review of the location of popular visitor attractions highlights that the Proposed Development is not in close proximity or within sight of the major tourist attraction in the Highlands, and therefore visitors would not be adversely affected by the Proposed Development. The local area has popular tourist settlements of Fort Augustus and Invergarry, which have a number of notable visitor attractions, assets and accommodation provision. However, the Proposed Development is located away from the main road and tourist routes. Furthermore, a review of secondary research confirms that tourists are not dissuaded from visiting and revisiting and area where there is renewable developments and associated infrastructure, such as pumped storage and associated grid infrastructure. In fact, there is a move toward accepting the importance of renewable energy, and an appreciation that renewable energy supports the plans for sustainable tourism.

15.7.39 Similarly, the review of core paths, rights of ways and hill tracks / mountain routes has shown that these would be largely unaffected by the Proposed Development, both at construction and operational stages. There are some recreational routes in close proximity to the Proposed Development, as noted within the Draft Outdoor Access Plan (see **Technical Appendix 15.3)** and there may be a temporal level impact for recreational users and tourists in some locations.

15.7.40 In line with criteria set out in **Table 15.3**, research and review suggest there would be **Negligible** and not significant impact for recreation users and tourists as a result of the construction and rerouting of the existing OHLs and operation and maintenance of the Proposed Development.

Cumulative Effects

Socio-economics Cumulative Effects

15.7.41 A headline assessment of cumulative development has been undertaken, this is based on the cumulative developments set out in other assessments, and importantly included Associated Works (as described in Section 3.5 of **Chapter 3: Project Description**), including the proposed Loch Lundie Substation, the proposed Coire Glas Switching Station and the consented Coire Glas Pumped Storage Scheme. Other developments considered in the cumulative assessment include the Skye Reinforcement Project (In Planning - Ref: ECU000043395) and Bharaidh Wind Farm Extension (In Planning – Ref ECU00004639).

Construction and Rerouting of the existing OHLs

15.7.42 Should the schemes as identified within 5.5 km (this is the cumulative study area used in the LVIA assessment) be constructed, the cumulative effect on direct and employment and economic benefits will be positive for both the THC and wider economies. It is beyond the scope of this chapter to calculate the likely direct employment and economic benefits of all the other surrounding schemes.

15.7.43 The estimated development and construction cost of the Proposed Development is expected to be approximately £47 million. It is outside the scope of this chapter to calculate expected direct economic benefits of construction of all schemes within the area, however, if the Proposed Development combined with the consented schemes within the region were constructed then a **Moderate Beneficial** cumulative effect is predicted in relation to direct economic and employment benefits.

Operation and Maintenance

15.7.44 It is likely that there will be some local employment generated onsite when operational as a result of the construction of the Proposed Development cumulatively with other consented energy developments. This could

include supply chain spin-offs for local businesses and sub-contracted work relating to the ongoing repair and maintenance of the Proposed Development. Therefore, whilst **Minor Adverse** cumulative effects on public access and recreation are predicted, these effects are effectively already accounted for when the Proposed Development is considered in isolation, and therefore these will remain as **Negligible** effects.

Recreation and Tourism Residual Effects

Construction and Rerouting of the existing OHLs

15.7.45 It is possible that the construction of the Proposed Development simultaneously with other schemes nearby could lead to a greater decrease in the availability of tourist accommodation within the area surrounding the site, particularly as there are limited accommodation opportunities within the local area. However, it is unlikely that this would cause a significant effect, and businesses would benefit during the 'off peak' season when there would usually be less demand for accommodation, therefore, a **Minor Beneficial** cumulative effect is predicted. Although there will be a dedicated work camp, it is expected that accommodation providers in Invergarry and Fort Augustus will also benefit from the level of overnight accommodation required as the capital project advances.

Operation and Maintenance

15.7.46 The Site is in a remote location where, despite a number of renewable energy and grid infrastructure projects being present or consented, these are not in locations that could cumulatively impact public access in the local area. Therefore, whilst **Minor Adverse** cumulative effects on public access and recreation are predicted, these effects are effectively already accounted for when the Proposed Development is considered in isolation, and therefore these will remain as **Negligible** effects.

15.8 Mitigation

15.8.1 No long-term significant effects are anticipated from the Proposed Development and therefore no specific mitigation measures are required. However, there are merits in adopting certain measures to enhance the economic, tourism and recreation impacts of the Proposed Development. In economic development terms, there will be the opportunity for local and regional businesses and workers to benefit from the expected employment opportunities. The Applicant can assist through the exchange of information on the type of opportunities that are likely to arise, though initiatives such as ‘Meet the Buyer’ and publicising local opportunities.

15.8.2 This assessment demonstrates that there are beneficial socio-economic effects across all phases of the Proposed Development. For example, the local economy would be supported by the Proposed Development through direct and indirect employment and expenditure opportunities.

15.8.3 Where there are short-term and temporal effects as a result of the construction and operation of the Proposed Development and rerouting of the existing OHLs on tourism and recreation receptors, measures are presented in the Draft Outdoor Access Management Plan (see **Technical Appendix 15.3: Draft Outdoor Access Management Plan**) as to how existing public access would be managed during the construction and operation of the Proposed Development.

15.8.4 SSEN Transmission has committed to maximise the economic opportunities for the local area and business and communities in the Highland Council area, where possible. SSEN Transmission, as in other developments and as set out in their corporate communications, is committed to using local supply chain where feasible and their principal contractors are also encouraged to do the same.

15.8.5 SSEN Transmission has a raft of corporate communications which can be reviewed on their corporate website as to the contribution it makes to the Scottish economy, its sustainability ethos and track record of developing and delivering on community investment.

15.8.6 To manage construction traffic associated with the Proposed Development, a Traffic Management Plan would be prepared by the Principal Contractor, in consultation with SSEN Transmission, The Highland Council and Transport Scotland. The Traffic Management Plan would describe all mitigation and signage measures that are proposed on the public road network. An Outline Traffic Management Plan is provided in **Appendix 12.1 Transport Assessment**.

15.9 Residual Effects

15.9.1 This section considers the potential residual effects and associated effect significance of the construction and operation of the Proposed Development, following the implementation of the mitigation measures proposed in Section 15.7.

Socio-economics Residual Effects

Construction and Rerouting of the existing OHLs

15.9.2 No specific mitigation measures are proposed in relation to socio-economics during the construction and rerouting of the existing OHLs phase due to no significant adverse effects being assessed (see paragraph 15.7.14). The predicted residual socio-economic effect in relation to construction and rerouting of the existing OHLs activities are deemed to be **Minor Beneficial** (not significant) at both the regional level and national level.

Operation and Maintenance

15.9.3 No specific mitigation measures are proposed in relation to socio-economics during the operational phase of the Proposed Development due to no significant adverse effects being assessed (see paragraph 15.7.24). The predicted residual socio-economic effect in relation to operational activities are deemed to be **Minor Beneficial** and not significant.

Recreation and Tourism Residual Effects

Construction and Rerouting of the existing OHLs

15.9.4 No significant effects are predicted on the tourism and recreation receptors during construction of the Proposed Development as well as rerouting of the existing OHLs, as set out in paragraph 157.40. Nevertheless, details to safeguard and manage existing public access during construction have been identified. As such, the residual construction and rerouting of the existing OHLs effects of the Proposed Development on recreation and tourism receptors in the study areas are deemed to be **Negligible** and not significant.

Operation and Maintenance

15.9.5 No significant effects are predicted on the tourism and recreation receptors during operation and maintenance phases of the Proposed, as set out in paragraph 15.7.40. Nevertheless, details to safeguard and manage existing public access during operation have been identified. As such, the residual operational and maintenance effects of the Proposed Development on recreation and tourism receptors in the study areas are deemed to be **Negligible** and not significant.

Cumulative Effects

Construction and Rerouting of the existing OHLs

15.9.6 The estimated development and construction cost of the Proposed Development is expected to be approximately £47 million. It is outside the scope of this chapter to calculate expected direct economic benefits of construction of all schemes within the area, however, if the Proposed Development combined with the consented schemes within the region were constructed then a **Moderate Beneficial** cumulative effect is predicted in relation to direct economic and employment benefits.

15.9.7 It is possible that the construction of the Proposed Development simultaneously with other schemes nearby could lead to a greater decrease in the availability of tourist accommodation within the area surrounding the

site, particularly as there are limited accommodation opportunities within the local area. However, it is unlikely that this would cause a significant effect, and businesses would benefit during the 'off peak' season when there would usually be less demand for accommodation, therefore, a **Minor Beneficial** cumulative effect is predicted. Although there will be a dedicated work camp, it is expected that accommodation providers in Invergarry and Fort Augustus will also benefit from the level of overnight accommodation required as the capital project advances.

Operation and Maintenance

15.9.8 It is likely that there will be some local employment generated onsite when operational as a result of the construction of the Proposed Development cumulatively with other consented energy developments. This could include supply chain spin-offs for local businesses and sub-contracted work relating to the ongoing repair and maintenance of the Proposed Development. Therefore, whilst **Minor Adverse** cumulative effects on public access and recreation are predicted, these effects are effectively already accounted for when the Proposed Development is considered in isolation, and therefore these will remain as **Negligible** effects.

15.9.9 The Site is in a remote location where, despite a number of renewable energy and grid infrastructure projects being present or consented, these are not in locations that could cumulatively impact public access in the local area. Therefore, whilst **Minor Adverse** cumulative effects on public access and recreation are predicted, these effects are effectively already accounted for when the Proposed Development is considered in isolation, and therefore these will remain as **Negligible** effects.

15.10 Summary and Conclusions

15.10.1 This Chapter considers the predicted effects on socio-economic activity, and recreation and tourism activity during construction and operation of the Proposed Development.

15.10.2 As a significant investment (approximately £47 million) in a key economic sector, the Proposed Development supports both pillars of the national economic strategy and each of the broad priority areas set out in the strategy. It would provide contract and employment opportunities for Scottish and Highland based businesses throughout the construction and operational phases.

15.10.3 The capital investment would enable a long-term security of supply and increasing capacity for renewable electricity generation for the region and Scotland as a whole.

15.10.4 There would be direct construction impacts for the Highlands and Scotland as a whole as part of the investment plans, where 63.8 PYEs would be generated as a result of the construction programme. Taking into account the origin of these jobs, displacement and multiplier effects the construction works alone would generate 16.8 PYE in the Highlands and 43.2 PYE at the Scottish level. This equates to a GVA impact of £1.19 million to the Highlands and £2.75 million at the Scottish level over the construction period.

15.10.5 Overall, taking account of displacement and multiplier effects, the Proposed Development is expected to generate 1.3 operational jobs per annum in the Highlands and 1.6 across Scotland per annum. This equates to a GVA impact of £48k to the Highlands and £92k across Scotland per annum.

15.10.6 The predicted residual socio-economic effect in relation to construction activities are deemed to be of **Minor beneficial** and not significant. The predicted residual socio-economic effect in relation to operational activities are deemed to be of **Minor beneficial** and not significant.

15.10.7 The review of the recreational and tourism asset base, this includes a review of all the notable visitor attractions, none of which are located close to the Proposed Development. Similarly, the review of core paths, rights of ways and hill tracks / mountain routes, has shown that these are largely unaffected by the Proposed Development.

15.10.8 The predicted residual recreational and tourism effect in relation to construction and rerouting of the existing OHLs and operation and maintenance activities are deemed to be **Negligible** and not significant. The predicted residual recreational and tourism effect in relation to operational activities are deemed to be **Negligible** and not significant.

15.10.9 SSEN Transmission has committed to maximise the economic opportunities for the local area and business and communities in the Highland Council area, where possible. SSEN Transmission, as in other developments and as set out in their corporate communications, is committed to using local supply chain where feasible and their principal contractors are also encouraged to do the same.

15.10.10 SSEN Transmission has a raft of corporate communications which can be reviewed as to the contribution it makes to the Scottish economy, its sustainability ethos and track record of developing and delivering on community investment.

15.10.11 In terms of the recreational and tourism effects, the routeing and alignment stage implemented mitigation by design, to minimise landscape and visual effects. Community consultation has been undertaken to gain the views on the routing and re-routing and SSEN Transmission has taken on board as far as possible these views in developing the Coire Glas Grid Connection to minimise against any adverse recreational and tourism impacts.